

## HISTORICAL NOTES ON THE GOLD-CURE.\*

BY PROF. H. CARRINGTON BOLTON.

**A**VOIDING all discussion of the merits or demerits of the so-called bichloride-of-gold cure, now so prominent in the public mind, we propose to show that the use of gold as a medicine is not so novel as commonly thought; and by extracts from early writers on chemistry and medicine to indicate the opinions held with respect to alleged "tinctures of gold" at different periods during several centuries.

The precious metal has been employed both externally and internally, in the metallic state, in solution, and by sympathy, for a great variety of the ills that flesh is heir to, for over two thousand years. The train of thought which led the ancients to employ this highly prized material can be well told in the quaint language of the distinguished Dutch physician and chemist, Hermann Boerhaave; writing about 1725, he says: "The alchemists will have this metal contain I know not what radical balm of life capable of restoring health and continuing it to the longest period. What led the early physicians to imagine such wonderful virtue in gold was that they perceived certain qualities therein which they fancied must be conveyed thereby into the body; gold, for instance, is not capable of being destroyed, hence they concluded it must be very proper to preserve animal substances and save them from putrefaction; which is a method of reasoning very much like that of some fanciful physicians who sought for an assuaging remedy in the blood of an ass's ear by reason the ass is a very calm beast!" (Shaw's translation, Boerhaave's Chemistry, London, 1727.)

Something of this sympathetical and mental effect was evidently sought to be attained in the very first instance of the ad-

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\* Read, in part, to the New York Academy of Sciences, June 6, 1892.

ministration of gold recorded in history. "And Moses took the (golden) calf which they had made, and burnt it with fire, and ground it to powder, and strewed it upon the water, and made the children of Israel drink of it." (Exodus, xxxii, 20.)

Pliny, in his marvelous compilation, "Natural History," written about 70 A. D., has a paragraph on the "medicinable virtues of gold" which in "divers waies is effectual in the cure of many diseases. For first of all sovereign it is for green wounds, if it be outwardly applied." Pliny describes a form of liniment of gold "torrefied with salt and schistis" which "healeth the foule tetter that appeareth in the face," fistulas, etc. And he alludes to a preparation of gold in honey which "doth gently loose the belly if the navel be anointed therewith." And in conclusion Pliny quotes Marcus Varro, who "saith that gold wil cause warts to fal off." (Holland's translation, London, 1634.) Varro was a friend of Cicero, which carries back this belief in the efficacy of gold to the first century before Christ.

The Arabian physicians, who for hundreds of years possessed almost exclusive knowledge of chemistry, often record the virtues of gold as a remedial agent in disease. Geber, who lived in the eighth century, wrote: "Gold is a medicine rejoycing and conserving the Body in Youth." (Russell's translation, London, 1678, p. 76.) Avicenna is said to have also written in its praise; also Arnald de Villanova (1235-1312).

The preparation of gold in a potable, innocuous form occupied the attention of the alchemists during several centuries; they commonly called it *aurum potable*, and ascribed to it not only remedial virtues but the power of prolonging life. The quotation from Geber shows that he shared this opinion.

To this elixir of life they gave many fanciful names: Elias Ashmole, in his *Theatrum Chemicum Britannicum*, says Saint Dunstan calls it the "food of angels," and others the "heavenly viaticum." Ashmole himself adds: "It is undoubtedly the true Alchochodon or giver of years, for by it man's body is preserved from corruption, being thereby enabled to live a long time without food; nay, 'tis made a question whether any man can die that uses it." (Written in 1652.)

The alchemists argued that this golden elixir is not to be made of vulgar gold, but only from philosophical gold prepared by hermetic art. Recipes for manufacturing this panacea abound in alchemical works, they are mostly very tedious, requiring endless repetitions and much faith on the part of the operator. One of the simplest methods of preparing *aurum potable* is given by Samuel Bolton in his curious little 16mo, "*Medicina magica tamen physica*," published at London in 1650: "Put foliated gold into a vessel well sealed with Hermes' seal; put it into our fire till it be

calcined to ashes; then sublime it into *flores*, having his *caput mortuum*, or black *terra damnata* in the bottom. Then let that which is sublimed be with the same degree of fire united to the same *caput mortuum* that it may be revived by it, as that all may be reduced into an Oyle which is called *Oleum Solis*. The dose hereof is two or three grains."

This description leaves much to the imagination, and in this respect differs little from others that we might quote. For the benefit of non-chemists we may add that few of the recipes yield a product containing gold, the metal often remaining in the part thrown away.

Roger Bacon, the Franciscan friar of the thirteenth century, to whom so many wonderful discoveries and inventions have been ascribed, had deep faith in the virtues of potable gold. Bacon, in a communication to Pope Nicolas IV, informs his Holiness of an old man who found some yellow liquor in a golden flask, when plowing one day in Sicily. Supposing it to be dew, he drank it off, and was immediately transformed into a hale, robust, and highly accomplished youth. Having abandoned his day-laboring he was admitted to the service of the King of Sicily, and served the court eighty years.

The belief in a life-prolonging elixir, sometimes claimed of the tincture of gold and sometimes of secret preparations, prevailed for centuries. Even so great a philosopher as Descartes believed he had attained the art of living a few hundred years; this belief was shared by some of his friends, and when he died before reaching sixty years they were convinced that he had been poisoned.

The alchemist Raymond Lully a contemporary of Friar Bacon, also experienced the restorative effect of this fountain of youth, if we can credit the statement in the curious verses of Sir George Ripley, composed in 1471:

"An Oyle is drawne owte in colour of Gold,  
Or lyke thereto out of our fire Red Lead,  
Whych Raymond sayd when he was old,  
Much more than Gold wold stand hym in stede.  
For when he was for age nygh dede,  
He made thereof *Aurum Potabile*  
Whych hym revvyd as men myght see."  
(Compound of Alehymie.)

Oswald Croll, a German physician of the sixteenth century, wrote in 1609 in praise of gold as a medicine. I quote the English translation of his *Basilica chymica*, published at London in 1670:

"It is the principle part of a Physician that would Cure the Sick, first to comfort the Heart, and afterwards assault the Disease. Those to whom the harmonious Analogy of Superiours and Inferi-



ours hath been known, and who from Suffrages of Astrologers have learned that to the two greatest Lights of Heaven, the two principle parts of Man, viz: the Heart and Brain, in things of Nature latently rests in *Gold*. . . . For Nature hath endowed Gold with no contemptible virtues, which who so knows how to draw out, and by ingenious Artifice is able rightly to use, he will find Gold, which seemed dead and barren, so lively and pregnant that it germinates and of itself progenerates new Gold. . . . Whence the true Philosophers have exquisitely prepared a wonderful and greatly to be desired Medicine with which the impurities of imperfect metals are removed and all vices of affects in incurable Diseases of Humane Bodies perfectly exterminated."

Croll then says he has tried almost one hundred different preparations of *aurum potabile*, and condemns most of them to recommend his own, fulminating gold, called by him "Calx of Sol." His process embraces nauseous ingredients, and the product is, as usual, free from gold.

Paracelsus, the physician who did so much to improve *materia medica* by introducing chemical medicines, does not neglect gold. Thurneisser, his disciple (both as respects his teachings and his charlatanism), made his royal dupes pay enormous sums for the "tincture of gold" which entered into his extraordinary prescriptions. To the use of royal touch pieces (gold coins) in the reigns of Charles II, James II, and Queen Anne, mere allusion should be made. Christopher Glaser (1663) gives among other preparations a "diaphoretic powder of gold" and prescribes it for continuous or intermittent fevers, the dose being four to twelve grains in wine, or in a spoonful of bouillon. (*Traité de la chymie*, Paris, 1663.)

Antoine Lecoq (or Gallus), a physician of Paris (1540), seems to have been the first to recommend gold for syphilis. He and his follower Fallopius (of Modena, 1565) described tedious processes for making preparations of gold. These processes were carefully repeated, about the beginning of this century, by Chevallier, a French pharmacist, who declares the products contain no gold at all.

Lamotte's "gold-drops," celebrated throughout Europe for over half a century (1725 to 1780), consisted of a solution of ferric chloride in alcohol; this possessed a yellow color, and was universally regarded as a tincture of gold, until the secret was bought and made public by the Russian Government. (*Kopp's Geschichte*.)

Frederic Hoffman, a famous German physician (1733), recommends gold for rheumatic fever.

Johann Rudolph Glauber, the German physician whose name is indelibly attached to "Glauber's salts," thought to improve the

latter by adding gold. "In all diseases and infirmities, of what name soever, the Spirit or Oil of Salt in which gold is rightly dissolved (or the *Aurum Potabile* with it), giveth present help, and in all dejections of the vital spirit . . . it giveth such relief that life and vigor may be somewhat farther protracted if two, three or four drops be administered as occasion shall serve in good Aqua vitæ or Cordiall Water. In like manner if three drops be administered once a week in generous wine or aqua vitæ, or other fit vehicle, it renovateth a man, makes him youthful, changeth gray hairs, produceth new nails and skin, preserveth from various and divers symptoms of diseases, and preserveth the body in such a state even to the prefixed hour of the Divine appointment." This is quoted by Glauber from Conrad Khunrath in his *Medulla destillatoria*, and he adds: "I some time since administered this Oil of gold for eight or ten days successively to an Infant for the freeing his body from mercury." (Glauber's Works, Packe's translation, London, 1689.)

Robert Boyle, in his *Usefulness of Natural Experimental Philosophy* (1663), expresses doubts as to the "strange excellency" of *aurum potabile*, remarking that "learned physicians and chymists have pronounced the preparation of potable gold as itself unfeasible." And he adds: "I should much doubt whether such a potable gold would have the prodigious virtues its encomiasts ascribe to it and expect from it; for I finde not that those I have yet met with deliver these strange things upon particular experiments duly made, but partly upon the authority of chymicall books, many of which were never written by those whose names they bear." He then proceeds to blame physicians for using expensive medicines and says: "T'were a good work to substitute cheap ones for the poorer sort of patients."

The change of opinion as respects the therapeutic value of gold, foreshadowed in the quotation from the astute Boyle, is well shown by comparing the passages on the subject in two different editions of Lémery's *Cours de Chymie*, one published in 1680 and one in 1730. In the earlier edition of Lémery's very successful work we read: "Gold is a good remedy for those that have taken too much mercury, for these two metals do easily unite together, and by this union or amalgamation the mercury fixes and its motion is interrupted." (Page 25.) "*Aurum fulminans* causes sweat and drives out ill humors by transpiration. It may be given in the small pox two to six grains in a lozenge or electuary. It stops vomiting and is also good to moderate the active motion of mercury." (Harris's translation, London, 1680, page 9.)

And in the later edition, the eleventh of the series, Lémery or his editor makes a very different statement:

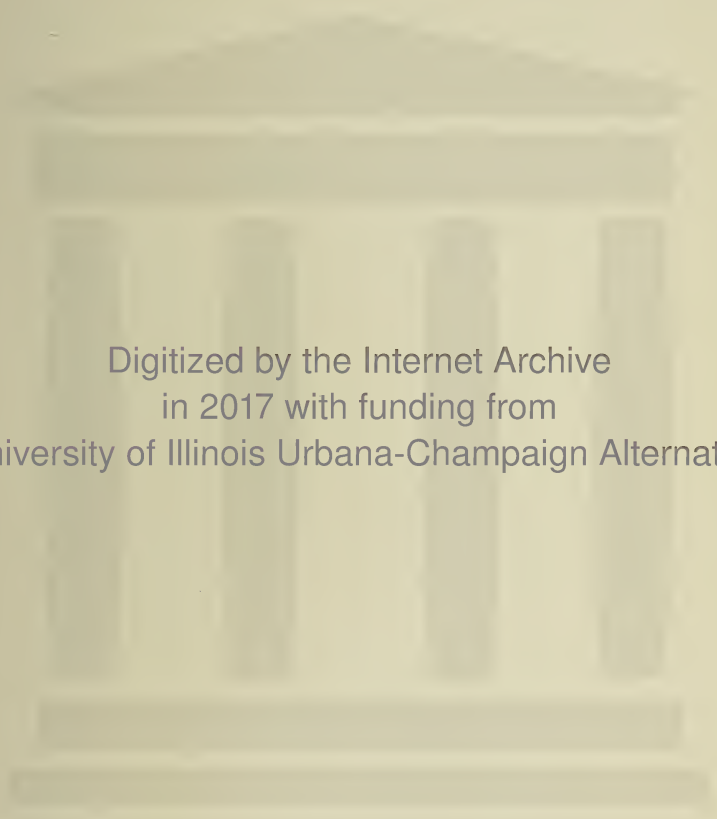
"Potable gold, so much praised by the alchemists, and sold so

dear by them, is commonly only a vegetable or mineral tincture of a color resembling gold, and as they make this tincture with a spirituous menstruum, it sometimes excites perspiration. This effect they ascribe to the gold, although the metal has rarely anything to do with it." (1730.)

In the works of Caspar Neumann a passage occurs that expresses so clearly the present views of many that it is hard to realize it was written nearly one hundred and fifty years ago. Neumann writes :

"Gold has been imagined to be possessed of extraordinary medicinal virtues, and many preparations, dignified with the name of this precious metal, have been imposed upon the public; but the virtues ascribed to gold have apparently no other foundation than credulity and superstition, and most of the golden medicines have no gold in them. Even when gold has been employed in the preparation there is seldom any of it retained in the product.

"We may say with Ludovici, 'It is better to make gold out of medicines than medicines out of gold.'" (Lewis's translation, London, 1759, page 38.)



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